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ABSTRACT

On the basis of the sibling-similarity hypothesis, it was hypothesized that females with a sister as opposed to females with a brother would report less past and desired sport participation and more psychological femininity. To investigate this hypothesis, sibling-sex-status and ordinal position effects were analyzed separately for females who were highly committed to sport and females who were less committed to sport. It was also hypothesized that females with sisters as opposed to brothers would be underrepresented in the physical education group. This latter hypothesis was partially supported since females with younger sisters, not older sisters, were underrepresented in the physical education group. Although no significant sibling-sex-status or ordinal position differences were found, these variables interacted significantly on one of the two measures of sport participation and on one of the two femininity scales. (Author)

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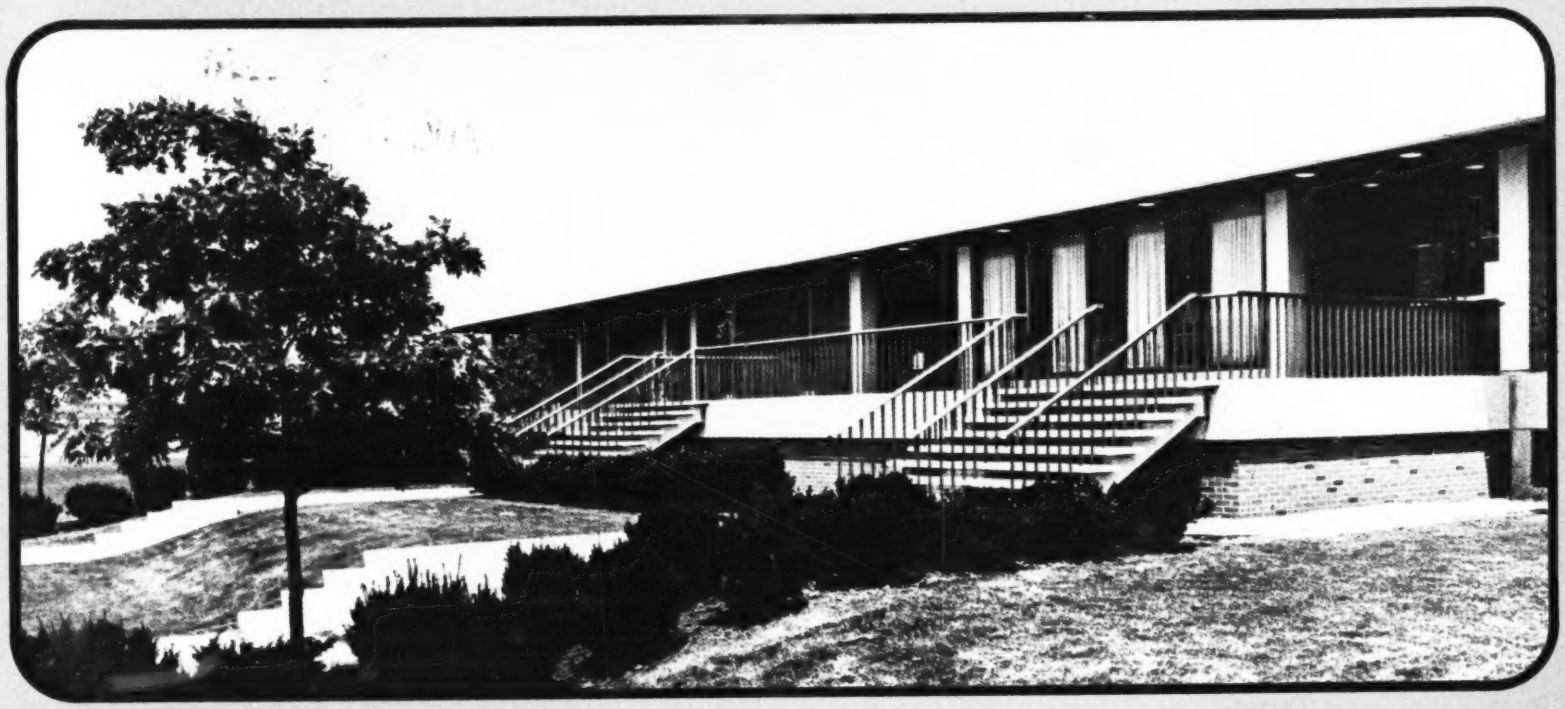

SIBLING-SEX-STATUS AND ORDINAL POSITION EFFECTS ON FEMALES' SPORT PARTICIPATION AND INTERESTS

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BISHOP, DOYLE, Ph.D., U. of Ill., 1967. Motor performance and play. Situational and personality correlates of play; play and cognitive development.

BREWER, WILLIAM F., Ph.D., U. of Iowa, 1967. Psycholinguistics. Aphasia; dyslexia.

BROWN, ANN, Ph.D., U. London, 1966. Retardation. Relational learning and transfer.

COHEN, LESLIE B., Ph.D., U.C.L.A., 1966. Infant attention. Perception, short-term memory in infants; cognitive development; learning in children.

COHEN, MIYE N., M.A., U.C.L.A., 1965. Data consultant. Statistical analysis; data collection in classroom settings.

ELLIS, MICHAEL J., Director, Motor Performance and Play Research Lab. Ph.D., U. of Ill., 1968. Motor performance and play. Acquisition of skill, motivation to and energetics of play.

FEHR, FRED S., Ph.D., Wash. U., 1966. Psychophysiology. Imitative behavior; conditioning of autonomic responses; clinical problems.

GLIDDEN, LARAINE, M.A., U. of Ill., 1969. Retardation and emotional disturbance. Short-term memory; paired-associate learning; mediation in learning and memory.

GOLD, MARC W., Ph.D., U. of Ill., 1969. Retardation and emotional disturbance. Learning; vocational training of the retarded; stimulus control in the classroom.

GREENWOLD, WARREN E., M. D., U. of Chicago, 1943. Pediatrics. Consulting Pediatrician from Carle Clinic, Urbana, Ill. Psychopharmacology of children; behavior problems associated with school; childhood diabetes.

JOHNSTON, PATRICIA V., Ph.D., U. of Ill., 1957. Neurochemistry. Lipid chemistry; nervous system ultrastructure; psychopharmacology.

LOCKE, JOHN L., Ph.D., Ohio U., 1968. Speech and hearing science. Acquisition and modification of phonetic-phonemic behavior; phonological encoding in short-term memory; learning processes in the deaf.

MARTENS, RAINER, Ph.D., U. of Ill., 1968. Motor performance and play. Social psychology of physical activity, anxiety, stress.

McINNIS, ELIZABETH, Ph.D., U. of Ill., 1969. Behavior modification. Development and evaluation of residential treatment programs; effect of punishment on deviant behavior.

MONKMAN, MARJORIE, D.S.W., Wash. U., 1965. Behavior disturbances. Treatment of behavior disorder children; social work education and child rearing.

SCOTT, KEITH G., Ph.D., U. of Conn., 1966. Mental retardation. Short-term memory; development of individual differences.

SCOTT, MARCIA S., Ph.D., U. of Ill., 1968. Learning. Conditions controlling acquisition and transfer in young and retarded children.

SIMMONS, WILBER D., Ed.D., U. of Ill., 1968. Gifted. Talented preschool screening.

SPRAGUE, ROBERT L., Director, Children's Research Center. Ph.D., Ind. U., 1960. Psychopharmacology. Behavioral effects of drugs; hyperactivity; learning in retardates.

STEINMAN, WARREN M., Ph.D., U. of Wash., 1966. Experimental analysis of behavior. Development of social control; behavior modification; secondary reinforcement.

VON NEUMANN, ALICE W., M.S.W., U. of Ill., 1966. Behavior disorders. Treatment of children in public school classrooms; parent-child interaction.

WERRY, JOHN S., M. D., U. New Zealand, 1955. Consulting Child Psychiatrist. Child Psychiatry. Psychopharmacology of children; behavior modification; brain behavior relationships.

SIBLING-SEX-STATUS AND ORDINAL POSITION EFFECTS ON FEMALES' SPORT PARTICIPATION AND INTERESTS[1]

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A. Introduction

The relationship between the distribution of rewards and punishments associated with the different ordinal positions in the family and various personality and behavioral variables has been the subject of many recent reviews (1, 7, 18, 23). However, little attention has been given to other variables of family structure; that is, variables such as sibling-sex-status, family size, and age difference between siblings. Some investigators have examined the effect of specific ordinal position and sibling-sex-status combinations on various personality and behavioral variables. These investigators have assumed that opposite sex siblings acquire some of the personality characteristics and behavioral patterns of the opposite sex sibling. Therefore, it is held that females with brothers tend to display a more masculine pattern of behavior than females with sisters. Leventhal (13) has termed this assumption the sibling-similarity hypothesis.

In general, the available literature is inconclusive with regard to the sibling-sex-status variables. The majority of the studies (2, 16, 17, 20) have shown that the Ss with opposite sex siblings possess more of the traits of the opposite sex than Ss with siblings of the same sex. Other studies (9, 21) have confirmed the sibling-similarity hypothesis for males but not for females. And the results of still other studies (12, 13) have been in opposition to the sibling-similarity hypothesis--that is, males with a female sibling were found to possess fewer sibling traits than males with a male sibling.

The inconsistent sibling-sex-status results have been credited (21) to lack of controls for family size, family completeness, socio-economic status, age of S, and age differences between S and siblings. Though attempts have been made with children's groups (8, 9, 10) to control or systematically vary the above factors, studies on young adults have not taken into account many of these possible confounding factors, especially age difference between the S and sibling.

The lack of control on these variables has perhaps led to the conflicting findings among college females from two-child families who have responded to various psychological femininity (Fe) scales. For example, studies have shown that females with a sister ($F1F^3$, FF2) either did not differ (12, 21) or were higher in Fe (17, 20) than females with a brother (F1M, MF2).

The present study sought to further investigate the effect of sibling-sex-status and ordinal position on college women's overall Fe and to explore in depth one aspect of Fe--sport and recreation participation and interests. Since sport participation in our society has been found (14, 19) to be negatively associated with the female sex role, one would expect on the basis of the sibling-similarity hypothesis that females with brothers would have greater sport participation and interests than females with sisters. Furthermore, if it is true that the social learning experiences associated with the various ordinal positions and sibling-sex-statuses lead to interests in and commitments to various adult occupational roles (15, 20), one would expect to find fewer females with sisters and less Fe among females who are highly committed to sport. This study also compared

those who were committed to sport (i.e., physical education majors--PE) with those who were less committed to sport (education majors--Ed) on their frequencies within the one- and two-child family position categories (i.e., F1; F1F; F1M; MF2; and FF2).

B. METHOD

1. Subjects

Sibling-sex-status, ordinal position, age, siblings' ages, and each parent's occupation and level of educational attainment were obtained from 742 college females, who were enrolled in classes required of education majors, and 171 females majoring in PE at the University of Illinois during the 1967-68 school year. The occupations of each parent and their amoung of formal education were used to determine the S's socio-economic status (6). Fifty-six PE majors and 146 Ed majors, who met the one- or two-child complete family criteria and who were not a twin, were used as Ss and compared for their frequencies (Refer to Table 1) within the one- and two-child family position categories.

Sometime later and without knowledge of the criteria for S selection, the Ss were approached by their classroom instructors and asked to participate in a study concerned with females' sport participation and interests. Seventy-four per cent of the Ss from the original sample of PE majors (F1F-5; F1M-12; FF2-9; and MF2-17) and Ed majors (F1F-22, F1M-21; FF2-23, and MF2-18) were tested. The subjects in each group were checked for differences on S's age, age difference between the S and sibling, and socio-economic status. The results of the Sibling-Sex-Status X Ordinal Position X Major Groups

analysis of variance showed no significant main effects or interactions for S's age and age difference between the S and sibling. However, the same analysis applied to the socio-economic status scores showed that the major group factor ($F = 8.70$, df = 1/119, $p < .01$) as well as the Ordinal Position X Major Groups interaction ($F = 4.44$, df = 1/119, $p < .05$) were significant. These significant results indicated that the PE majors as a whole, particularly the PE F1F's, were lower in socio-economic status than the Ed majors.

2. Instruments and Design

Each of the 43 PE majors and 84 Ed majors responded directly to a modification (11) of the Sutton-Smith and Rosenberg (22) Recreation Inventory and two Fe scales: the Gough (4) Scale of Psychological Femininity [Gough] and the Minnesota Multiphasic Personality Inventory--masculinity-femininity scale [MMPI-Fm] (5).

Prior to the present investigation, 40 male and 40 female college students, who were randomly selected from required physical education classes, rated on an 11 point graphic scale their perceptions as to the masculinity-femininity associated with each of 94 sports and 92 recreational activities (11). Only items with standard deviations less than 1.00 were retained and considered for inclusion within the nine equally weighted sport and recreational activity categories used to assess Ss' sport participation. Sport and recreational activities were placed into the following six mutually exclusive game categories described by Sutton-Smith and Rosenberg (22): games of physical skill; physical skill + strategy; outdoor skills; games of chance; games of strategy; and games of chance + strategy. In order to avoid eliminating a great many of the sports within the category of games of physical skill in achieving

equally weighted categories, the present investigator placed sports in which the outcome is determined by judges' ratings (e.g., gymnastics, diving, synchronized swimming, etc.) into a separate sport category referred to as physical skill-performance. In addition, those recreational activities which received extreme high or low feminine ratings from the 40 male and 40 female raters were placed into the two remaining categories.

To diminish the possible effect of geographical and economic restrictions, the measure used for Ss sports and recreation participation was the S's average past and desired self-report sport participation. In addition, the means of the previously determined masculine-feminine sport ratings were substituted for each item responded to by the S within the four sport categories and the average of these means were used as measures of the S's masculine-feminine sport participation.

Due to the significant differences between the PE and Ed major groups on socio-economic status, the data for each of these groups were analyzed in separate designs. In order to test for the effects of sibling-sex-status, ordinal position, as well as the interactions between these factors, the sport participation data for both the PE and Ed majors were treated in a 2 X 2 X 9 factorial design with two levels of sibling-sex-status, two levels of ordinal position, and nine sport and recreational activity categories. The masculine-feminine sport data for both the PE and Ed majors were treated in a 2 X 2 X 4 factorial design with the same levels as above except that the last factor consisted of only four sport categories. For both measures, a

three-factor analysis of variance (unweighted means solution) with repeated measures on the last factor was used to determine the effect of conditions. The Fe data for both the PE and Ed major groups were treated in a 2 X 2 factorial design with two levels of sibling-sex-status and two levels of ordinal position.

C. RESULTS

1. Frequencies Within the Family Position Categories

The cross-classification of the frequency of PE and Ed majors in the one- and two-child family position categories (Table 1) resulted in a $\underline{X}^2$ of 9.26, which for df = 4 was short of significance

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Insert Table 1 about here

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at the .05 level. Although the nonsignificant $\underline{X}^2$ value indicated independence for the overall table, the 2 X 5 table was partitioned (3) in order to determine if nonindependence existed among some of the PE and Ed family position categories. An examination of Table 2 shows that only the F1F's ($p < .02$), not the FF2's, were significantly underrepresented in the PE group.

Insert Table 2 about here

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2. Analysis of Variance

The analysis of variance for past and desired sport participation for both the Ed and PE majors showed that the effects of sibling-sex-status, ordinal position, and the interaction of these factors were nonsignificant. Although the sport categories factor was significant

for both the PE (F = 17.69, df = 8/312, $p < .01$) and Ed (F = 75.07, df = 8/640, $p < .01$) majors, none of the interactions with this factor were significant. A Newman-Keuls Test (24, p. 309) showed that the PE and Ed majors participated most in high feminine recreational activities, games of chance + strategy and outdoor activities, while few participated in high masculine recreational activities and games of chance. The participation of the PE majors ($\bar{X}$ = 83.65) summed over all nine categories was greater than that of the Ed majors ($\bar{X}$ = 74.02). Moreover, the most notable differences between groups was the greater participation of the PE majors in the four sport categories ($\bar{X}$ = 97.55) and high masculine recreational activity category ($\bar{X}$ = 41.06) than the Ed majors ($\bar{X}$s = 72.51, 27.07) respectively.

The analysis of variance for the Ed majors on masculine-feminine sports showed that the sibling-sex-status (F = 0.67, df = 1/80, $p > .05$) and ordinal position (F = 2.53, df = 1/80, $p > .05$) effects were not significant independently; however, the interaction of these two factors was significant (F = 5.43, df = 1/80, $p < .05$). *Post hoc* analysis (24, p. 244 & 378) of the simple main effects showed that the F1M's participated in significantly more masculine sports than the MF2's (t = 2.70, df = 80, $p < .01$) but did not differ from the F1F's (t = 1.72, df = 80, $p > .05$), and FF2's (t = 0.86, df = 80, $p > .05$). However, these same factors and their interaction were not significant on the masculine-feminine sport scores of the PE majors. For both the PE (F = 7.64, df = 3/117, $p < .01$) and Ed (F = 42.69, df = 3/240, $p < .01$) major groups the sport category factor was significant. A Newman-Keuls Test (24, p. 309) indicated that for the PE and Ed groups the sports within the physical skill-performance category ($\bar{X}$s = 5.90, 6.18) were significantly more feminine than those within the physical skill

+ strategy category ($\bar{X}$ = 4.60, 4.08). None of the other interactions with the sport categories factor were significant for the PE and Ed major groups.

The analysis of Fe variance for the Ed majors on the MMPI-Fm scale showed a nonsignificant effect of sibling-sex-status (F = 1.22, df = 1/80, $p > .05$) and ordinal position (F = 1.03, df = 1/80, $p > .05$); however, the interaction of these variables was significant (F = 6.87, df = 1/80, $p < .01$). *Post hoc* analysis (24, p. 244) showed that the Ed F1M's responded in a significantly more masculine pattern on the MMPI-Fm scale than the Ed F1F's (t = 2.70, df = 80, $p < .01$) and MF2's (t = 2.53, df = 80, $p < .05$), but did not differ from the FF2's (t = 1.57, df = 80, $p > .05$). The results for the PE majors on the MMPI-Fm scale showed that the effect of sibling-sex-status, ordinal position and the interaction of these factors were nonsignificant. The results on the Gough scale for both PE and Ed majors likewise showed no significant effects of sibling-sex-status, ordinal position and the interaction of these factors. When the means of the Ed majors were compared to the PE majors on the Fe scale, the Ed majors were found to be more feminine ($\bar{X}$ = 40.26) than the PE majors ($\bar{X}$ = 34.80) on the MMPI. Although the differences between the Ed majors ($\bar{X}$ = 35.93) and PE majors ($\bar{X}$ = 32.12) were in the same direction on the Gough scale, they were much smaller.

D. DISCUSSION

The general assumption of differences between groups was supported since the PE majors as contrasted to the Ed majors, participated more in the four sport categories as well as in the high masculine recreational activity category. In addition, the PE majors as compared to the Ed majors were lower in socio-economic status and Fe.

The hypothesis that females with sisters, as opposed to those with brothers, would show a lesser commitment to sport by differential enroll-

ment in Ed rather than PE was only partially supported. Of the females with sisters, only the F1F's were underrepresented among the PE majors. This underrepresentation of PE F1F's supports other findings since the F1F's, with few exceptions (16) have tended to be higher in Fe (17, 20, 21) than the FF2's. Contrary to the above F1F profile, the F1F's who were in the PE group, were lowest in socio-economic status and Fe among all of the PE and Ed conditions.

The hypothesis that females with sisters, as opposed to females with brothers, would report less past and desired sport participation was not supported. In addition, there were no interactions between ordinal position and sibling-sex-status as might be expected from the differential frequencies of the F1F's in the PE and Ed major groups. Perhaps the measures of sport participation used in the present study were not sensitive enough to determine the subtle differences which might exist between F1F's and the other family position categories. If this is the case, behavioral measures of females' actual sport participation in conjunction with their past performance records in various sports should be investigated further.

On the other measure of sport participation--masculine-feminine sports as well as for the Fe data--the hypothesized sibling-sex-status effect was not confirmed; however, the significant Sibling-Sex-Status X Ordinal Position interaction showed that the Ed F1M's participated more in the sports with higher masculinity ratings than the Ed MF2's and, in addition, had higher masculinity scores on the MMPI-Fm scale than the MF2's and F1F's. Although it is difficult to compare these results to other studies due to the lack of control on possible confounding variables, in studies on college women where the MMPI was used the F1M's have been found to be higher in anxiety but not in Fe (16). Generally, there has been a

tendency for the MF2's during primary socialization periods to be the most masculine female (9, 21); however, this tendency disappears when older age groups have been examined (13, 17). It may be that certain power advantages (e.g., physical size and maturity) enable the F1M's to sustain interaction in sports and games with her younger male sibling and his playmates much longer than her counterpart, the MF2.

The nonsignificant results on the Gough Fe scale do not concur with the Rosenberg and Sutton-Smith (17) findings in which their Ed F1F's appear to be significantly different from the other three female two-child family position categories. The present results on the Gough scale are, however, in agreement with those of Leventhal (12) who found that for females sibling-sex-status was not predictive of differences in Fe. Although the differences between the Rosenberg et al. findings and the Leventhal findings may be due to sampling or control differences, the different findings on these two Fe scales in the present study point to differences among the various clusters of trait dimensions making up these Fe scales. In a recent study Leventhal (13), using college males, has shown that some trait dimensions on the Gough and MMPI-Fm scales support the sibling-similarity hypothesis while other trait dimensions do not; in addition, these two Fe scales differ in the amount in which each of the trait dimensions are expressed.

For both the PE and Ed majors sports within the category of physical skill-performance--aesthetic sports in which the outcome is determined by judges' ratings (e.g., gymnastics, diving, synchronized swimming, etc.)--received a higher feminine sport mean than the sports within the categories of games of physical skill. This finding

suggests that many physical activities are deemed as more appropriate for women in our society and that definite social stereotypes may exist which might tend to inhibit women from participating in many sports.

The fact that PE majors did not differ on sibling-sex-status and ordinal position for masculine-feminine sports and Fe may be due to the high selectivity of the PE majors in which other variables (i.e., socio-economic status) may override the effects of sibling-sex-status and ordinal position.

E. SUMMARY

On the basis of the sibling-similarity hypothesis, it was hypothesized that females with a sister as opposed to females with a brother would report less past and desired sport participation and more psychological femininity. To investigate this hypothesis, sibling-sex-status and ordinal position effects were analyzed separately for females who were highly committed to sport (physical education majors) and females who were less committed to sport (education majors). In addition, it was also hypothesized that females with sisters as contrasted to females with brothers would be underrepresented in the physical education group. This latter hypothesis was partially supported since females with younger sisters, not females with older sisters, were underrepresented in the PE group. Although no significant sibling-sex-status or ordinal position differences were found, these variables interacted significantly on one of the two femininity scales (MMPI-Fm scale) as well as one of the two measures of sport participation (i.e., masculine-feminine sports participation). Again

these interactions only partially supported the first hypothesis since it indicated that only females with younger brothers, not older brothers, reported more participation in masculine sports and were lower in femininity.

References

1. Bradley, R. W. Birth order and school related behavior: A heuristic review. Psychological Bulletin, 1968, 70, 45-51.
2. Brim, O. G. Family structure and sex-role learning by children: A further analysis of Helen Koch's data. Sociometry, 1958, 21, 1-16.
3. Castellan, J. N. On partitioning of contingency tables. Psychological Bulletin, 1965, 64, 330-338.
4. Gough, H. Identifying psychological femininity. Educational and Psychological Measurement, 1952, 12, 427-439.
5. Hathaway, S. R. and McKinley, J. C. The Minnesota Multiphasic Personality Inventory Manual (Rev.) New York: Psychological Corporation, 1951.
6. Hollingshead, A. D. and Redlich, F. C. Social Class and Mental Illness: A Community Study. New York: John Wiley and Sons, Inc., 1958.
7. Kammeyer, K. Birth order as a research variable. Social Forces, 1967, 46, 71-80.
8. Koch, H. The relation of certain family constellation characteristics and the attitudes of children toward adults. Child Development, 1955, 26, 13-40.
9. Koch, H. Sissiness and tomboyishness in relation to sibling characteristics. Journal of Genetic Psychology, 1956, 88, 231-244.

10. Koch, H. Some emotional attitudes of the young child in relation to characteristics of his siblings. Child Development, 1956, 27, 393-426.

11. Landers, D. M. Sibling-sex-status and ordinal position of female physical education majors and their sport participation and interests. Unpublished doctoral dissertation, University of Illinois, 1969.

12. Leventhal, G. S. Sex of sibling as a predictor of personality characteristics. Paper presented at the Southeastern Psychological Association, Atlanta, 1965.

13. Leventhal, G. S. Some effects of having a brother or sister. Paper presented at the meeting of the American Psychological Association, San Francisco, August, 1968.

14. Moss, H. A. and Kagan, J. Stability of achievement and recognition seeking behavior from early childhood through adulthood. Journal of Abnormal and Social Psychology, 1961, 62, 504-513.

15. Nisbitt, R. E. Birth order and participation in dangerous sports. Journal of Personality and Social Psychology, 1968, 8, 351-353.

16. Rosenberg, B. G. and Sutton-Smith, B. Ordinal position and sex-role identification. Genetic Psychology Monographs, 1964, 70, 297-328.

17. Rosenberg, B. G. and Sutton-Smith, B. Family interaction effects on masculinity-femininity. Journal of Personality and Social Psychology, 1968, 8, 117-120.

18. Sampson, E. E. The study of ordinal position: Antecedents and outcomes. In: Maher, B. A. (Ed.). Progress in Experimental Personality Research, Vol. 2, New York: Academic Press, 1965.

19. Sutton-Smith, B., Rosenberg, B. G., and Morgan, E. E. The development of sex differences in play choices during preadolescence. Child Development, 1963, 34, 119-126.

20. Sutton-Smith, B., Roberts, J. M., and Rosenberg, B. G. Sibling associations and role involvement. Merrill-Palmer Quarterly, 1964, 10, 25-38.

21. Sutton-Smith, B. and Rosenberg, B. G. Age changes in the effects of ordinal position on sex-role identification. Journal of Genetic Psychology, 1965, 107, 61-75.

22. Sutton-Smith, B. and Rosenberg, B. G. The Sibling. New York: Holt, Rinehart & Winston, in press.

23. Warren, J. R. Birth order and social behavior. Psychological Bulletin, 1966, 65, 38-49.

24. Winer, B. J. Statistical Principles in Experimental Design. New York: McGraw-Hill, 1962.

Footnotes

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[3]The number indicates ordinal position and always follows the subject of discussion; the "F" (female) or "M" (male) not followed by a number indicates the sex and position of the subject's sibling. For example, an F1F is a first-born female with a younger sister while an MF2 is a second-born female with an older brother.